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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,868	04/30/2007	Wataru Ikeda	P41852-01	3584

42212 7590 05/13/2011
PANASONIC PATENT CENTER
1130 CONNECTICUT AVENUE NW, SUITE 1100
WASHINGTON, DC 20036

EXAMINER

SELLERS, DANIEL R

ART UNIT	PAPER NUMBER
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2614

NOTIFICATION DATE	DELIVERY MODE
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05/13/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/587,868	Applicant(s) IKEDA ET AL.	
	Examiner DANIEL SELLERS	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. **Claims 1, 3, 7 and 8** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 and 2 of U.S. Patent No. 7,881,589 B2 in view of Fielder et al. (previously cited and hereinafter Fielder), "Introduction to Dolby Digital Plus, an Enhancement to the Dolby Digital Coding System", AES Convention Paper 6196 presented at the 117th AES Convention on October 28-31, 2004.

4. Regarding **claim 1**, see claim 1 of '589. The claim makes obvious all but the features of detecting whether or not a channel attribute of the extended data is surround and capable of being processed.

Fielder teaches an introduction to Dolby Digital Plus and an enhancement to Dolby Digital coding system (see Fielder, abstract and p. 1, section "1. Introduction"). Fielder teaches that an enhanced Dolby Digital stream (E-AC-3)

can support more channels than the typical 5.1 surround system (5 audio channels and 1 low-frequency effect channel) (see Fielder, p. 2, section "1.1. Increased Flexibility"). Specifically, Fielder teaches a dependent substream (reads on extended data) to extend a 5.1 surround signal to a 7.1 surround signal (see Fielder, pp. 19-20, section "5.1. Increased Channel and Program Carriage"). One of ordinary skill in the art at the time of the invention would have found it obvious to use extended data to create larger surround programs for an enhanced multimedia experience (see Fielder, p. 2, section "1.1. Increased Flexibility"). It would have been obvious at the time of the invention for one of ordinary skill in the art to combine '589 and Fielder for the purpose of creating an enhanced multimedia experience.

5. Regarding **claim 3**, see the preceding rejection with respect to claim 1 and claim 3 of '589. The combination of claims 1 and 3 of '589 with the teachings of Fielder makes obvious these features.

6. Regarding **claim 7**, see the preceding rejection with respect to claim 1. The combination of claim 1 of '589 and Fielder makes obvious these features.

7. Regarding **claim 8**, see the preceding rejection with respect to claim 1. The combination of claim 1 of '589 and Fielder makes obvious these features.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. **Claims 1-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (hereinafter Ikeda), US 2008/0131085 A1, further in view of Fielder et al. (previously cited and hereinafter Fielder), "Introduction to Dolby Digital Plus, an Enhancement to the Dolby Digital Coding System", AES Convention Paper 6196 presented at the 117th AES Convention on October 28-31, 2004.

10. Regarding **claim 1**, Ikeda teaches a reproduction apparatus for selecting an audio stream from a plurality of audio streams written in a stream number table, and reproducing the selected audio stream together with a video stream, the reproduction apparatus comprising:

a selecting unit operable to make a judgment on which among a plurality of predetermined conditions are satisfied by each of the plurality of audio streams written in entries of the stream number table, the entries corresponding one-to-one to the plurality of audio streams, and to select an audio stream to be reproduced among the plurality of audio streams, in accordance with each combination of predetermined conditions satisfied by each audio stream (see Ikeda, ¶ 0008 and 0202-0213); and

a reproducing unit operable to reproduce the selected audio stream (see Ikeda, ¶ 0082 and figure 1, units 200 and 300), wherein

one of the plurality of predetermined conditions is that a channel attribute of an audio stream is surround and a surround output is available (see Ikeda, ¶ 0210),

..., and

when there is at least one audio stream satisfying the predetermined condition among the plurality of audio streams written in the entries of the stream number table, the selecting unit

selects the audio stream satisfying the predetermined condition as the audio stream to be reproduced among the plurality of audio streams. (see Ikeda, ¶ 0212-0213)

Ikeda teaches the above features in a home theater system. However,

Ikeda does not appear to teach:

if an audio frame of a target audio stream is composed of basic data and extended data, the selecting unit judges whether or not the predetermined condition is satisfied by detecting whether or not a channel attribute of the extended data is surround and the extended data is capable to be processed

Fielder teaches an introduction to Dolby Digital Plus and an enhancement to Dolby Digital coding system (see Fielder, abstract and p. 1, section "1. Introduction"). Fielder teaches that an enhanced Dolby Digital stream (E-AC-3) can support more channels than the typical 5.1 surround system (5 audio channels and 1 low-frequency effect channel) (see Fielder, p. 2, section "1.1. Increased Flexibility"). Specifically, Fielder teaches a dependent substream (reads on extended data) to extend a 5.1 surround signal to a 7.1 surround signal (see Fielder, pp. 19-20, section "5.1. Increased Channel and Program Carriage"). One of ordinary skill in the art at the time of the invention would have found it obvious to use extended data to create larger surround programs for an enhanced multimedia experience (see Fielder, p. 2, section "1.1. Increased Flexibility"). It would have been obvious at the time of the invention for one of ordinary skill in the art to combine Ikeda and Fielder for the purpose of creating an enhanced multimedia experience.

11. Regarding **claim 2**, see the preceding rejection with respect to claim 1.

The combination of Ikeda and Fielder teaches the reproduction apparatus of claim 1, further comprising:

a status register that stores a first flag group, which corresponds to basic data of a plurality of encoding methods (see Ikeda, ¶ 0163 and 0171-0173), and a second flag group which corresponds to extended data of the plurality of encoding methods (see Ikeda, ¶ 0171-0173 in view of Fielder, pp. 1, 2, and 19-20), wherein

the first flag group is composed of a plurality of flags that indicate, for each of the plurality of encoding methods, whether or not the reproduction apparatus has a capability to process the basic data (see Ikeda, ¶ 0171-0173),

the second flag group is composed of a plurality of flags that indicate, for each of the plurality of encoding methods, whether or not the reproduction apparatus has a capability to process the extended data (see Ikeda, ¶ 0171-0173 in view of Fielder, pp. 1, 2, and 19-20), and

the detection of whether or not the extended data is capable to be processed is accomplished by checking whether or not a value set in a flag, which belongs to the first flag group and corresponds to the target audio stream, is a predetermined value (see Ikeda, ¶ 0204).

12. Regarding **claim 3**, see the preceding rejection with respect to claim 2.

Ikeda and Fielder make obvious the reproduction apparatus of claim 2, wherein

the capability to process the extended data is categorized into three levels referred to as a first level, a second level, and a third level,

wherein at the first level, it is capable to decode the extended data and output a result of the decoding as a surround output (see Ikeda, ¶ 0171-0173);

at the second level, it is capable to decode the extended data and output a result of the decoding as a stereo output (see Ikeda, ¶ 0171-0173); and

at the third level, neither a surround output nor a stereo output is available, and the predetermined value is a value indicating the first level (see Ikeda, ¶ 0171-0173 and 0211).

13. Regarding **claim 4**, see the preceding rejection with respect to claim 1.

The combination teaches the reproduction apparatus of claim 1, wherein

the detection of whether or not the extended data is capable to be processed is accomplished by checking whether or not either the reproduction apparatus or a device connected to the reproduction apparatus has a capability to decode the extended data (see Ikeda, ¶ 0204).

In the combination, Ikeda teaches the detection of capabilities and checking to see if the reproduction apparatus has the capabilities to decode the data. Fielder teaches extended data by virtue of the dependent streams in the E-AC-3 stream, and it would be obvious for a reproduction device to announce the capability of decoding the E-AC-3 stream so that it can be detected and checked according to the teachings of Ikeda.

14. Regarding **claim 5**, see the preceding rejection with respect to claim 1.

The combination teaches the reproduction apparatus of claim 1, wherein

the detection of whether or not the extended data is capable to be processed is accomplished by checking whether or not it is capable to transmit either the extended data that has been compressed or non-compressed digital data that has been obtained by decoding the extended data, to a connected device (see Ikeda, ¶ 0008 and 0202-0213 and Fielder, pp. 1, 2, and 19-20).

In the combination, Fielder teaches a dependent stream, which reads on the extended data, and Ikeda teaches detection of capabilities. In a combination of these teachings, it would be obvious that the capability extends to describe both compressed and non-compressed transmission between any of the devices (see Ikeda, ¶ 0171-0173 and 0204). One of ordinary skill in the art at the time of the invention would have found it obvious to send either compressed or non-compressed digital data to the playback apparatus based on detected capabilities (see Ikeda, ¶ 0171-0173, wherein AC-3 is compressed and is interchangeably referred to as "Dolby 5.1" based on, at least, teachings in Fielder).

15. Regarding **claim 6** see the preceding rejection with respect to claim 1.

The combination teaches the reproduction apparatus of claim 1, wherein

the detection of whether or not the extended data is capable to be processed is accomplished by checking whether or not a speaker of a connected device supports surround audio (see Ikeda, ¶ 0202-0213).

In the combination, Ikeda teaches the detection of capabilities and checking to see if the reproduction apparatus has the capabilities to decode the data. Fielder teaches extended data by virtue of the dependent streams in the E-AC-3 stream, and it would be obvious for a reproduction device to announce the desired format (i.e. 7.1 surround) and check to see if the number of speakers support the reproduction in a manner that can be detected and checked according to the teachings of Ikeda.

16. Regarding **claim 7**, Ikeda teaches a non-transitory computer readable medium storing a program that causes a computer to execute the steps of:

making a judgment on which among a plurality of predetermined conditions are satisfied by each of a plurality of audio streams written in entries of the stream number table, the entries corresponding one-to-one to the plurality of audio streams, and selecting an audio stream to be reproduced among the plurality of audio streams, in accordance with each combination of predetermined conditions satisfied by each audio stream (see Ikeda, ¶ 0008 and 0202-0212); and

reproducing the selected audio stream, wherein
one of the plurality of predetermined conditions is that a channel attribute of an audio stream is surround and a surround output is available (see Ikeda, ¶ 0210), and

if an audio frame of a target audio stream is composed of basic data and extended data, the audio stream selecting step judges whether or not the predetermined condition is satisfied by detecting whether or not a channel attribute of the extended data is surround and the extended data is capable to be processed (see Ikeda, ¶ 0171-0173 and 0204 and Fielder, pp. 1, 2, and 19-20); and

when there is at least one audio stream satisfying the predetermined condition among the plurality of audio streams written in the entries of the stream number table, the selecting of the audio stream to be reproduced further includes selecting the audio stream satisfying the

predetermined condition as the audio stream to be reproduced among the plurality of audio streams. (see Ikeda, ¶ 0212-0213)

17. Regarding **claim 8**, Ikeda teaches a reproduction method for selecting an audio stream from a plurality of audio streams written in a stream number table, and reproducing the selected audio stream together with a video stream, the method comprising:

making a judgment on which among a plurality of predetermined conditions are satisfied by each of the plurality of audio streams written in entries of the stream number table, the entries corresponding one-to-one to the plurality of audio streams, and selecting an audio stream to be reproduced among the plurality of audio streams, in accordance with each combination of predetermined conditions satisfied by each audio stream (see Ikeda, ¶ 0008 and 0202-0212); and

reproducing the selected audio stream, wherein
one of the plurality of predetermined conditions is that a channel attribute of an audio stream is surround and a surround output is available (see Ikeda, ¶ 0210), and

if an audio frame of a target audio stream is composed of basic data and extended data, the audio stream selecting step judges whether or not the predetermined condition is satisfied by detecting whether or not a channel attribute of the extended data is surround and the extended data is capable to be processed (see Ikeda, ¶ 0171-0173 and 0204 and Fielder, pp. 1, 2, and 19-20) and

when there is at least one audio stream satisfying the predetermined condition among the plurality of audio streams written in the entries of the stream number table, the selecting of the audio stream to be reproduced further includes selecting the audio stream satisfying the predetermined condition as the audio stream to be reproduced among the plurality of audio streams. (see Ikeda, ¶ 0212-0213)

18. Regarding **claim 9**, see the preceding rejection with respect to claim 1.

The combination teaches the reproduction apparatus of claim 1, wherein

an encoding method of the target audio stream is DD/DD+, and the basic data of the audio frame is an independent substream and the extended data of the audio frame is a dependent stream (see Ikeda, ¶ 0171-0173, wherein AC-3 is equivalent to Dolby Digital (DD) and see Fielder, pp. 1, 2, and 19-20).

19. **Claims 10-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ikeda and Fielder as applied to claim 1 above, and further in view of Mesarovic et al. (previously cited and hereinafter Mesarovic), US 2006/0013077 A1, and Thomson, "DTD Unveils DTS-HD Brand for High Definition Media Formats" (previously cited).

20. Regarding **claim 10**, see the preceding rejection with respect to claim 1. The combination of Ikeda and Fielder teaches the reproduction apparatus of claim 1, wherein the basic data of the audio frame is a core substream and the extended data of the audio frame is an extension substream (see Fielder, pp. 19-20). However, the combination does not teach the encoding method of DTS-HD.

Mesarovic teaches an audio-video system with specific audio format modules (see Mesarovic, abstract, ¶ 0013, 0037 and figure 4, unit 402). Specifically, Mesarovic teaches an A/V system that can support a variety of formats including DTS (see Mesarovic, ¶ 0027 and 0037). It would have been obvious at the time of the invention for one of ordinary skill in the art to combine Ikeda, Fielder, and Mesarovic for the purpose of supporting popular media codecs. However, the combination does not teach DTS-HD.

Thomson teaches that Digital Theater Systems, Inc. has renamed DTS++ to DTS-HD and intends to market the product as a lossless high fidelity product along side its other DTS formats (see Thomson, p. 1). It would have been obvious

at the time of the invention for one of ordinary skill in the art to combine Ikeda, Fielder, Mesarovic, and Thomson for the purpose of supporting a wide array of formats that a user would encounter and want to reproduce on a home audio/visual system.

21. Regarding **claim 11**, see the preceding rejection with respect to claims 1 and 10. The combination teaches the reproduction apparatus of claim 1, wherein

an encoding method of the target audio stream is DD/MLP, and the basic data of the audio frame is DD(AC-3) data and the extended data of the audio frame is an MLP audio (obvious in view of Fielder, pp. 19-20 and Mesarovic, ¶ 0027).

22. Regarding **claim 12**, see the preceding rejection with respect to claims 1 and 10. The combination teaches the reproduction apparatus of claim 1, wherein

encoding methods of the target audio stream include DD/DD+, DTS-HD, DD/MLP (see Fielder, pp. 1, 2, and 19-20, see Mesarovic, ¶ 0027, and see Thomson, p. 1);

the basic data of the DD/DD+ is an independent substream and the extended data of the DD/DD+, of the audio frame is a dependent substream (see Fielder, pp. 19-20);

the basic data of the DTS-HD is a core substream and the extended data of the DTS-HD is an extension substream (see Fielder, pp. 19-20 in view of Thomson); and

the basic data of the DD/MLP is DD(AC-3) data and the extended data of the DD/MLP is an MLP audio (see Fielder, pp. 19-20 in view of Mesarovic, ¶ 0027).

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lindemann et al., US 2004/0223622 A1 (previously cited), teaches a digital wireless loudspeaker system with enabling of different speaker modes (see ¶ 0064-0066);

Imadate, US 2004/0190726 A1 (previously cited), teaches a switching circuit to switch to a quasi-stereo mode when a mono signal is input (see ¶ 0006 and figure 3); and

Thagard et al., US 6,215,737 B1 (previously cited), teaches a multi-channel digital audio with different multiple resolutions for channels or groups of channels (see abstract, column 2, lines 33-67, and figure 1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL SELLERS whose telephone number is (571)272-7528. The examiner can normally be reached on Monday to Friday, 10 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Davetta W. Goins can be reached on (571)272-2957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel R. Sellers/
Examiner, Art Unit 2614

/Davetta W. Goins/
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